Kevin Doyle
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Data Manager with a strong statistical background to investigate questions regarding the recovery of consciousness in the Neurocritical Care Unit at Columbia University Medical Center.

Education:

MA Biology - Applied Evolution
Stony Brook University, Stony Brook, NY 2015
Relevant coursework: Biometry, Computational Biology, Population Genetics
GPA: 3.8

BS Biology - Ecology & Evolution
Stony Brook University, Stony Brook, NY 2013
Minor: Ecosystems and Human Impact

Experience:

Data Manager
Columbia University Medical Center (CUMC), New York, NY Feb 2017 - Present
Acquire patient data from the electronic medical record to analyze projects for attending physicians, fellows, and residents within the Neurocritical Care Unit.

- Creation of multi-center RedCap database used for studies related to consciousness
- Manage CUMC's Subarachnoid Hemorrhage Outcomes Project database
- Create R scripts to perform most day-to-day project analyses
- Developed R package containing functions to assist with general demographic analyses
- Use of scikit-learn and mne Python modules to perform quantitative electroencephalography analyses
- Experience running jobs on a Sun Grid High Performance Computing Cluster
- Taught colleagues how to program and perform analyses in R; have plans to create an introduction to R course for colleagues in our unit

Histology Technician
Antech Diagnostics, Lake Success, NY Nov 2016 - Jan 2017
Assisted in the histological process of identifying cancerous tumor progression for diagnostic purposes. Took thin sections around surgical margin of all diseased tissues and organs greater than 10 cm in length and fixed them in paraffin.

- Use of a Laboratory Information System to input and manage data
- Took sections around surgical margin to determine extent of disease
- Worked closely with fellow co-workers to meet daily quota minimums

Hollister Lab of Evolutionary Genomics
Stony Brook University, Stony Brook, NY Aug 2015 - May 2016
Project: Evolution of allopolyploidy in *Arabidopsis thaliana*
Utilized Genome Analysis Toolkit to acquire, organize, and analyze Illumina next-generation sequencing data. Analyzed haplotype variance to infer global patterns of genomic divergence.

- Created bash scripts to enhance existing pipelines to streamline analyses
- Maintained data and documentation organized on Unix server
- Monitored RAM and CPU usage from pipelines for maximum efficiency
- Utilized GATK, Biopython, and R to analyze variation among individuals

Baines Lab of Aquatic Ecology
Stony Brook University, Stony Brook, NY Aug 2013 - May 2016
Project: Fe Limitation in the Copepod *Acartia tonsa*
Designed an experiment to determine the critical Fe:C threshold where iron limitation occurs in *Acartia tonsa* and performed statistical analyses using R and Excel to find where threshold occurred.

- Maintained organized records of calculations and analyses
- Used R package 'segmented' to estimate where Fe threshold occurred by calculating the breakpoint between two separate linear regressions of egg production with replete Fe and egg production with deplete Fe
- Wrote paper (*Estimating the Threshold of Iron Limitation in the Copepod Acartia tonsa*) for publication

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Publications:

1. Claassen, J., **Doyle, K.**, et al. (2019). *Command Following Detected by EEG in Acutely Unresponsive Patients*. Manuscript submitted for publication.
2. Rohaut, B., **Doyle, K.**, et al. (2019). *Deep structural brain lesions associated with consciousness impairment early after haemorrhagic stroke*. Manuscript submitted for publication.
3. Roh, D., Chang, T., Zammit, C., Wagener, G., Reynolds, A., Yoh, N., Elkind, M., **Doyle, K.**, et al. (2019). Functional Coagulation Differences Between Lobar and Deep Intracerebral Hemorrhage Detected by Rotational Thromboelastometry: A Pilot Study. *Neurocritical Care 1-7*
4. Megjhani, M., Terilli, K., Frey, H., Velazquez, A., **Doyle, K.**, et al. (2018). Incorporating High-Frequency Physiologic Data Using Computational Dictionary Learning Improves Prediction of Delayed Cerebral Ischemia Compared to Existing Methods. *Frontiers in neurology* 9, 122

Extra Curricular:

Music Performance:
I have played the saxophone since elementary school and joined the Stony Brook University Wind Ensemble during my undergraduate career. In recent years, I have begun to play the guitar and piano as well.